

# Customized Focus

## One-Stop System Solutions

GREEF NEW ENERGY



Hybrid Convertor

Wind Tracker Controller



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# HYBRID CONVERTOR

## Product Overview

GREEF ENERGY multi-functional converter integrates the capabilities of AC-to-DC rectification for PM generators, battery charging, DC-to-AC inversion, and an energy management system. Featuring a configurable dual LCD touchscreen, it utilizes advanced converter technology to achieve stable voltage/frequency control for PMSGs, ensuring seamless load power supply. It can also be configured to switch to a grid-tied mode for operation and grid charging.

## Leading Feature

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**EMS**  
 smart energy management system
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**Backup Power**  
 AC/DC dual backup for auxiliary power supply
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**Control**  
 Water gate motor control function (optional)
- 
**Multiple Modes**  
 Multiple configurable operating modes: off-grid, grid-tied, and grid charging
- 
**Control Technology**  
 Control Technology for Unbalanced Loads
- 
**Remote Monitoring**  
 WIFI/ LAN Remote monitoring and control app available (optional)
- 
**Touch Display**  
 Double LCD smart touch Screen Display
- 
**Standard Protocol**  
 Standard RS 485 modbus RTU protocol
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**Customized**  
 Support customized sensor control function (optional)
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**Curve Tracking**  
 Generator power curve tracking technology
- 
**Protection Function**  
 PMW dump load over voltage over speed protection function (optional)
- 
**STS**  
 Support add Static Transfer Switch (STS) for Grid-Tie/Off-Grid Applications (optional)

## Technical Specifications

Model	ACPCS-100kt	ACPCS-150kt	ACPCS-200kt	ACPCS-250kt	ACPCS-300kt	ACPCS-500kt
<b>Generator AC Input side parameters</b>						
Rated power(kW)	100	150	200	250	300	500
Rated voltage(Vac)	≥240					
Optimal generator rated voltage(Vac)	450					
Start voltage (Vac)	≥180					
AC voltage working range(Vac)	150~550					
Maximum AC current(A)	241	361	481	451	722	1203
<b>Battery input Data</b>						
Battery type	Lithium-ion Customizable					
Battery voltage range(Vdc)	400-900(Customizable)					
Rated battery voltage(Vdc)	400-900(Customizable)					
Max charging&discharging Current(A)	250	362.5	600	362.5	750	651
<b>Output side parameters (grid-connected)</b>						
Rated charging/discharging power(kw)	100	150	200	240	300	500
Maximum charge and discharge power(kw)	120	170	240	170	360	600
Rated charge and discharge current(A)	144	209	289	209	433	722
Maximum charge-discharge current(A)	173	245	346	245	520	866
Rated grid voltage(V)	400					
Permissible grid voltage range(v)	300-460					
Rated grid frequency(Hz)	50/60					
Current total harmonic distortion rate(% (at rated power))	<3					
Power factor	>0.99					
Power factor range	-1~1					
Overload capacity (Pn,continuous for 1 minute)	1.2					
<b>AC side parameter (off-grid)</b>						
Rated input voltage(V)	400					
Voltage deviation(%)	±2					
etotalharmonicdistortionrate (% (linear load))	<3					
<b>Protection</b>						
Over voltage & speed protection	Optional					
AC short-circuit protection	Supported					
AC output overcurrent protection	Supported					
Surge protection	Level 2					
<b>Basic parameters</b>						
Maximum efficiency(%)	95%					
Topology	AC-DC Rectifier ,DC- DC Buck boost ,DC-AC Inverter.EMS					
Ambient temperature(°C )	-40~60					
Protection level	IP20					
Display Contents	Generator speed(rpm),Input voltage (Vdc) , Input current(Vac) ,Output power(kW) , Grid voltage (Vac),Grid current(A) , Power generate today(kWh), Power generate this month, Power generate last month, Power generate this year, Power generate last year,Power Curve setting.					
Cooling method	Intelligent air cooling					
Maximum operating altitude(m (derating when >3,000m))	4,000					
Standby power consumption(W)	<50					
Display	LCD SMART Touch Screen					
Communication mode	Ethernet, RS485, WIFI					



## Technical Specifications

Model	PCTC-1.5KW	PCTC-2KW	PCTC-3KW	PCTC-5KW	PCTC-10KW
Generator rated power	1.5KW	2KW	3KW	5KW	10KW
Generator rated voltage	AC220V-240V	AC220V-240V	AC220V-380V	AC380-550V	AC380-550V
Function	Rectifier,Control,DC output				
Automatic protection function	Over voltage protection, Grid cut off protection, Regulated supply output, Arrester				
Manual function	Manual brake, Reset, Emergency switch				
Display mode	LCD Touch Screen				
Display content (larger one)	Generator speed(rpm),Input voltage (Vdc), Input current(Vac),Output power(kW), Grid voltage (Vac),Grid current(A), Power generate today(kWh),Power generate this month, Power generate last month, Power generate this year,Power generate last year,Power Curve setting.				
PWM constant voltage	≥400dc	≥400dc	≥400dc	≥400dc	≥700dc
Generator 3-phase dump load voltage	450±5Vdc	450±5Vdc	450±5Vdc	750±5Vdc	750±5Vdc
3-phase dump load time-lapse	12-20 min				
Efficiency	98%				
Environment temperature	-30-60°C				
Relative humidity	< 90% No condensation				
Noise (1m)	<40dB				
Degree of protection	IP20(Indoor) IP65 (Outdoors)				
Cooling method	Forced air cooling				
Communication interface (optional)	RS485/USB/GPRS/WIFI/Ethernet				
Controller Net Dimensions (mm)	500*395*270	500*395*270	500*395*270	500*395*270	550*395*270
Controller Net Weight(kg)	20	20	22	22	25
Dump Load Net Dimensions (mm)	620*215*190	620*215*190	620*215*190	620*215*190	690*520*270
Dump Load Net Weight (kg)	14	14	14	30	45
Packaging dimensions (mm)	500* 325*261.2	500* 325*261.2	500* 325*261.2	1P:500*325*370 3P:500* 325*261.2	500*325*671.2
Packaging weight (kg)	46	47	48	52	73

Model	PCTC-15KW	PCTC-20KW	PCTC-30KW	PCTC-50KW	PCTC-80KW	PCTC-100KW
Generator rated power	15KW	20KW	30KW	50KW	80KW	100KW
Generator rated voltage	AC380-550V			AC450-600V		
Function	Rectifier,Control,DC output					
Automatic protection function	Over voltage protection, Grid cut off protection, Regulated supply output, Arrester					
Manual function	Manual brake, Reset, Emergency switch					
Display mode	LCD Touch Screen					
Display content (larger one)	Generator speed(rpm),Input voltage (Vdc), Input current(Vac),Output power(kW), Grid voltage (Vac),Grid current(A), Power generate today(kWh),Power generate this month, Power generate last month, Power generate this year, Power generate last year,Power Curve setting.					
PWM constant voltage	≥ 700dc					
Generator 3-phase dump load voltage	750±5Vdc					
Generator 3-phase dump load time-lapse	12-20 min					
Efficiency	98%					
Environment temperature	-30-60°C					
Relative humidity	<90% No condensation					
Noise (1m)	<40dB					
Degree of protection	IP20(Indoor) IP65 (Outdoors)					
Cooling method	Forced air cooling					
Communication interface (optional)	RS485/USB/GPRS/WIFI/Ethernet					
Controller Net Dimensions (mm)	550*395*270	550*395*270	680*620*460	710*620*460	964*770*1240	964*770*1240
Controller Net Weight(kg)	30.1	30.1	37	50	70	80
Dump Load Net Dimensions (mm)	690*520*270	690*520*270	710*890*590	660*660*1410	650*550*1650	650*650*1650
Dump Load Net Weight(kg)	50	50	91	91	120	160
Packaging dimensions (mm)	500*325*671.2	500*325*805	700*630*480 (Main Unit)	730*630*480 (Main Unit)	990*790*1290 (Main Unit)	990*790*1290 (Main Unit)
			500*620*805.4 (Dump Load)	500*620*1154.2 (Dump Load Single box size,2 boxes total)	500*620*1154.2 (Dump Load Single box size,2 boxes total)	700*700*1875 (Dump Load)
Packaging weight (kg)	86	98	53 (Main Unit) 125 (Dump Load)	61 (Main Unit) 135 (Dump Load)	160 (Main Unit) 220 (Dump Load)	185 (Main Unit) 290(Dump Load)